

In the Claims

1-12 (Canceled)

13. (Currently Amended) A welding system comprising:

a power source configured to condition raw power and supply a power usable during a welding process;

a wire feeder configured to receive the power from the power source and supply a consumable electrode to a weld, the wire feeder having a torch connected thereto, wherein the torch is activated via depression of a pushbutton trigger mounted thereto;

a transmitter configured to detect activation of the torch and transmit signal between approximately 10 milliseconds and 750 milliseconds to a receiver of the power source indicative of activation of the torch; [[and]]

a welding cable connecting the power source and the wire feeder such that the signal is transmittable thereacross from the transmitter to the receiver, the power source and wire feeder connected such that a voltage is not created across the weld cables until the transmitter transmits a signal to the receiver signaling that the torch has been activated; and

wherein the power source further includes circuitry such that a secondary power is not output until activation of the torch.

14. (Original) The welding system of claim 13 configured to not have an open circuit voltage across the welding cables when the power source is powered on and the torch is not activated.

15. (Canceled)

16. (Original) The welding system of claim 15 wherein the wire feeder is further configured without a contactor to close a circuit between a secondary power output of the power source and the torch.

17. (Original) The welding system of claim 13 wherein the transmitter is further configured to transmit the signal to the receiver encoded with information regarding desired operational parameters of the power source.

18. (Original) The welding system of claim 17 wherein the desired operational parameters include at least one of power source output magnitude, power source welding mode, purging, and jogging.

19. (Previously Presented) A method of remotely controlling a power source for welding comprising the steps of:

detecting activation of a triggering mechanism of a welding-type torch to initiate a welding-type process;

transmitting a signal ~~within a range of approximately 1.3 Hz to 100 Hz~~ indicative of desired operational parameters of the power source through at least a weld cable ~~connected between the power source and the triggering mechanism~~ automatically upon activation of the trigger;

receiving the signal remotely from the trigger mechanism; [[and]]

controlling the power source in accordance with data embodied in the signal transmitted through at least the weld cable;

preventing an open circuit voltage between the welding-type torch and the power source during non-activation of the trigger; and

only allowing current flow between the power source and the welding-type torch when the trigger is activated.

20. (Canceled)

21. (Canceled)

22. (Original) The method of claim 19 further comprising the step of transmitting a pulsed signal upon activation of the trigger through the weld cable, the pulsed signal having a width indicative of a desired secondary output of the power source.

23. (Original) The method of claim 19 further comprising the step of receiving feedback of a voltage at a weld and automatically adjusting output of the power source based on the feedback.

24. (Original) The method of claim 23 further comprising the step of adjusting output of the power source to accommodate losses that occur across the weld cable between the power source and the welding arc.

25. (Canceled)